

CURRICULUM VITAE
PRAMOD ACHARYA, Ph.D.

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RESEARCH INTERESTS

cropping systems, soil carbon and nitrogen management, greenhouse gas emissions, soil health, conservation agriculture

EDUCATION

Degree	Major	Year	Institute	Advisor	GPA
Doctoral	Plant and Environmental Science	2023	New Mexico State University (NMSU), Las Cruces, NM	Dr. Rajan Ghimire	4.00
MS	Biology	2019	Eastern New Mexico University (ENMU), Portales, NM	Dr. Young Cho	3.90
BS	Agriculture	2014	Tribhuvan University, Lamjung, Nepal	-	3.99

PROFESSIONAL EXPERIENCE

2023 onwards	Postdoctoral Research Associate NMSU Agricultural Science Center, Clovis, NM
2019– 2023	Graduate Research and Teaching Assistant Department of Plant and Environmental Sciences, NMSU, Las Cruces, NM
2017–2019	Graduate Teaching Assistant Department of Biology, ENMU, Portales, NM
2018 (summer)	Research Assistant (Intern) NMSU Agriculture Service Center, Clovis, NM
2017–2018	Greenhouse Overseer ENMU, Portales, NM
2012–2013	Research Assistant (Project: Promoting organic production and marketing systems through policy, information, and advocacy - PROMS III) IAAS and NPG, Nepal

PUBLICATIONS

Peer-reviewed Journal Article

1. **Acharya, P.**, Ghimire, R., Acosta-Martínez, V. 2024. Cover crop mediated soil carbon storage and soil health in semi-arid irrigated cropping systems. *Agriculture, Ecosystems and Environment* [<https://doi.org/10.1016/j.agee.2023.108813>]

2. Adhikari, A. D., Shrestha, P., Ghimire, R., Liu, Z., Pollock, D. A., **Acharya, P.**, Aryal, D. R. 2023. Cover crop residue quality regulates litter decomposition dynamics and soil carbon mineralization kinetics in semi-arid cropping systems. *Applied Soil Ecology* [<https://doi.org/10.1016/j.apsoil.2023.105160>]
3. **Acharya, P.**, Ghimire, R., Lehnhoff, E. A, and Marsalis, M. A. 2023. Cover crop forage potential and subsequent sorghum silage yield and nutritive value. *Agronomy Journal* [<https://doi.org/10.1002/agj2.21334>]
4. **Acharya, P.**, Ghimire, R., Paye, W. S., Galguli, A. C., and DelGrosso, S. J. 2022. Net greenhouse gas balance with cover crops in semi-arid irrigated cropping systems. *Scientific Reports* [<https://doi.org/10.1038/s41598-022-16719-w>]
5. Paye, W. S., **Acharya, P.**, and Ghimire, R. 2022. Water productivity of forage sorghum in response to winter cover crops in semiarid irrigated conditions. *Field Crops Research* [<https://doi.org/10.1016/j.fcr.2022.108552>]
6. **Acharya, P.**, Ghimire, R., Cho, Y., Thapa, V. R., and Sainju, U. M. 2022. Soil profile carbon and nitrogen and crop yield responses to cover crops in a limited irrigation winter wheat-sorghum-fallow. *Nutrient Cycling in Agroecosystems* [<https://doi.org/10.1007/s10705-022-10198-1>]
7. Paye, W. S., Ghimire, R., **Acharya, P.**, Nilahyane, A., Mesbah, A. O., Marsalis, M. 2022. Cover crop water use and corn silage production in semi-arid irrigated conditions. *Agricultural Water Management* [<https://doi.org/10.1016/j.agwat.2021.107275>]
8. Ghimire, R., Parajulee, M. N., **Acharya, P.**, Dhakal, D. P., Hakeem, A., and Lewis, K. L. 2021. Soil acidification in a continuous cotton production system. *Agricultural & Environmental Letters* [<https://doi.org/10.1002/ael2.20048>]
9. **Acharya, P.**, Ghimire, R., and Cho, Y. 2019. Linking soil health to sustainable crop production: dairy compost effects on soil properties and sorghum biomass. *Sustainability* [<https://doi.org/10.3390/su11133552>]

Book Chapter

10. Ghimire, R., Thapa, V. R., **Acharya, P.**, Wang, J., and Sainju, U. M. 2021. Soil indicators and management strategies for environmental sustainability. In: Rakshit, A., Singh, S., Abhilash, P., and Biswas, A. (eds). *Soil Science: Fundamentals to Recent Advances*. Springer, Singapore. [https://doi.org/10.1007/978-981-16-0917-6_7]

Manuscripts Under Review (submitted to peer-reviewed journals)

11. **Acharya, P.**, Ghimire, R., Idowu, O. J., Shukla, M. K., 2023. Soil aggregates and associated carbon and nitrogen storage in semi-arid cover cropping systems.
12. Singh, A., Ghimire, R., **Acharya, P.**, 2023. Soil profile carbon sequestration and nutrient responses to cover cropping in semi-arid irrigated forage rotations.

13. Paye, W. S., **Acharya, P.**, Ghimire, R., Lauriault, L., 2023. Soil carbon and nitrogen responses to dryland forage cropping systems following irrigation retirement.
14. Bista, D., Sapkota, S., **Acharya, P.**, Acharya, R., Ghimire, G., 2023. Reducing energy and carbon footprint in semi-arid irrigated cropping systems by cover crop integration in crop rotations.

FUNDED GRANT PROPOSALS

1. Cover crops for improving nitrogen use efficiency in a semiarid irrigated forage rotation. 2021–2023. Graduate Student Research Grant, Sustainable Agriculture Research and Education (SARE) (**\$20,612**)
2. Soil nutrients and above and belowground biomass partitioning with compost application rates in winter wheat. 2018–2019. Graduate Student Grant, ENMU (**\$400**)
3. Climate Assembly '*Jalwayu shava*' - Promoting Global Action Day. 2013. Nepalese Youth for Climate Action, Nepal (**\$200**)

RESEARCH INVOLVEMENT

1. Improving climate resilience through carbon management and soil health research, outreach, and education activities (2022 onwards)
2. Alternative forage cropping strategies while transitioning from irrigated farming to drylands (2021 onwards)
3. Evaluation of interseeded alfalfa for limited irrigated southern Great Plains forage systems (2022 onwards)
4. Linking soil health with crop production, soil carbon sequestration, and other ecosystem services (2019–2023)
5. Cover crops for improving nitrogen use efficiency in a semiarid irrigated forage rotation (2021–2023)
6. Abundance and diversity of ground beetles' dynamics under diverse cover crops in a winter wheat-sorghum-fallow rotation (2019–2020)
7. Energy and carbon footprint of cover cropping in a semi-arid irrigated agriculture (2019–2023)
8. Cover crops affect soil organic carbon and nitrogen dynamics in a winter wheat–sorghum–fallow crop rotation (2017–2020)
9. Dairy compost application affects soil properties and sorghum biomass production (2018–2019)
10. Impact of integrated pest management - farmers' field school (IPM-FFS) training on farmers of Lamjung district. IAAS, Tribhuvan University, Lamjung, Nepal (2013–2014)
11. Effect of planting density on yield and yield attributes of okra (*Abelmoschus esculentus* L.). IAAS, Tribhuvan University, Lamjung, Nepal (2012–2013)

12. Non-chemical approach to effectively manage the aphid population in green bean (*Phaseolus vulgaris*). IAAS, Tribhuvan University and Nepal Permaculture Group (NPG) (2012–2013)
13. Growth and yield of rice influenced by variety and number of seedlings at Sundarbazaar, Lamjung. IAAS, Tribhuvan University, Lamjung, Nepal (2012)

CONFERENCE ACTIVITY

Poster Presentation

- Acharya, P.**, Ghimire, R., and Paye, W. S. Soil health changes in cover crop-integrated forage production systems under irrigated semiarid conditions. International Annual Meeting of ASA, CSSA, and SSSA, Baltimore, MD, Nov 6–9. [[CrossRef](#)]
- Adhikari, A. D., **Acharya, P.**, Ghimire, R., Liu, Z., Shrestha, P. 2022. Residue quality affects litter decomposition dynamics and carbon and nitrogen mineralization in semi-arid agroecosystems. New Mexico Academy of Science Research Symposium 2022, Albuquerque, NM, Nov 4.
- Acharya, P.**, and Ghimire, R. 2022. Soil organic carbon and net greenhouse gas balance in irrigated cover crop-forage rotation. Thirteenth International Conference, NMSU Nepalese Student Association. Virtual event, Apr 9. [**Best Poster Award**] [[CrossRef](#)]
- Acharya, P.**, and Ghimire, R. 2022. Soil organic carbon and net greenhouse gas balance in irrigated cover crop-forage rotation. NMSU, College of Agriculture, Consumer, and Environmental Science Open House, Las Cruces, NM, Apr 9.
- Acharya, P.**, Ghimire, R., and Paye, W. S. 2021. Biotic and environmental control of greenhouse gas emissions in irrigated cover crop-forage rotations. American Geophysical Union Fall Meeting, New Orleans, LA, Dec 13–17. [[CrossRef](#)]
- Acharya, P.** and Ghimire, R. 2021. Selected soil health indicators at cover crop termination in an irrigated forage corn-sorghum rotation. International Annual Meeting of ASA, CSSA, and SSSA, Salt Lake City, UT, Nov 7–10. [[CrossRef](#)]
- Acharya, P.**, Ghimire, R., Cho, Y., Thapa, V. R., and Sainju, U. M. 2021. Effects of cover crops on crop yield and soil profile carbon and nitrogen stock in a limited irrigation condition. Western Society of Crop Science Annual Meeting (Virtual) June 22–23. [**First Place**] [[CrossRef](#)]
- Acharya, P.**, Ghimire, R., and Paye, W. S. 2021. Greenhouse gas emission in an irrigated cover crop-forage rotation. Twelfth International Conference, NMSU Nepalese Student Association. Virtual event, Apr 17. [[CrossRef](#)]
- Acharya, P.**, Ghimire, R., and Paye, W. S. 2021. Greenhouse gas emissions and crop yield in an irrigated forage rotation. First Annual Soil Health Innovations Conference, The National Center for Appropriate Technology. Virtual event March 8–9. [[CrossRef](#)]

- Ghimire, R., **Acharya, P.**, Paye, W., and Marsalis, M. A. 2020. Cover crop effects on soil water dynamics under irrigated forage corn and sorghum. Western Society of Crop Science Annual Meeting, Virtual meeting, July 7–8. [[CrossRef](#)]
- Acharya, P.**, Ghimire, R., and Cho, Y. 2019. Cover crops and compost effects on soil organic matter dynamics: examples from the southern Great Plains region. International Annual Meeting of ASA, CSSA, and SSSA, San Antonio, TX, Nov 9–13. [[CrossRef](#)]
- Abdelaziz, N., Ghimire, R., **Acharya, P.**, Mesbah, A. O., and Marsalis, M. A. 2019. Effect of cover crops on soil water dynamics and forage production. International Annual Meeting of ASA, CSSA, and SSSA, San Antonio, TX, Nov 9–13. [[CrossRef](#)]
- Acharya, P.**, and Ghimire, R. 2019. Soil health and forage quality response of sorghum to dairy compost application. NMSU Field Day, Clovis, Aug 8.
- Acharya, P.**, Ghimire, R., and Cho, Y. 2019. Cover crops affect soil organic carbon and nitrogen in a winter wheat-sorghum-fallow rotation. Student Research and Creativity Conference (SRCC), ENMU, Portales, Apr 3. (**First place**) [[CrossRef](#)]
- Acharya, P.**, Ghimire, R., and Cho, Y. 2019. Soil organic carbon and nitrogen pools as indicators of soil health in a winter wheat-sorghum-cover crop rotation. Graduate Education Day, New Mexico State Capitol, Santa Fe, NM, Feb 11.
- Acharya, P.**, Ghimire, R., and Cho, Y. 2019. Soil organic carbon and nitrogen pools as indicators of soil health in a winter wheat-sorghum-cover crop rotation. Soil Health Institute Annual Meeting, Albuquerque, NM, Aug 1–3.

Oral Presentation

- Acharya, P.**, and Ghimire, R. 2023. Greenhouse gas emissions from different pasture cropping strategies after irrigation retirement. International Annual Meeting of ASA, CSSA, and SSSA, St Louis, MO, Oct 29 – Nov 1. [[CrossRef](#)]
- Singh, A., Ghimire, R., and **Acharya, P.** 2023. Cover crops impact on soil health under corn-sorghum rotation in semi-arid regions. International Annual Meeting of ASA, CSSA, and SSSA, St Louis, MO, Oct 29 – Nov 1. [[CrossRef](#)]
- Acharya, P.**, Ghimire, R., Lehnhoff, E. A., and Marsalis, M. A. 2022. Cover crop forage potential and subsequent forage sorghum yield and nutritive value. International Annual Meeting of ASA, CSSA, and SSSA, Baltimore, MD, Nov 6–9. [[CrossRef](#)]
- Acharya, P.**, Ghimire, R., Marsalis, M. A., and Lehnhoff, E. A. 2022. Cover crops for improving forage sorghum yield and nutritive value in water-limited environments. Western Society of Crop Science Annual Meeting, June 21–22, Fort Collins, CO. (**First Place**) [[CrossRef](#)]
- Acharya, P.**, Ghimire, R., and Paye, W. S. 2021. Greenhouse gas emissions and global warming potential of cover crop mixtures in irrigated forage production systems. International Annual Meeting of ASA, CSSA, and SSSA, Salt Lake City, UT, Nov 7–10. [[CrossRef](#)]

- Paye, W. S., Ghimire, R., **Acharya, P.**, Nilahyane, A., Mesbah, A. O., and Marsalis, M. 2021. Cover crop water use and corn silage production in semiarid irrigated conditions. International Annual Meeting of ASA, CSSA, and SSSA, Salt Lake City, UT, Nov 7–10. [[CrossRef](#)]
- Ghimire, R., **Acharya, P.**, Paye, W. S., Thapa, V. R., and Angadi, S. V. 2021. Strategies for soil health and carbon management in semiarid environments. International Annual Meeting of ASA, CSSA, and SSSA, Salt Lake City, UT, Nov 7–10. [[CrossRef](#)]
- Acharya, P.**, Ghimire, R., and Cho, Y. 2019. Compost application rate affected soil properties and sorghum biomass production. SRCC, ENMU, Portales, NM, Apr 3.
- Acharya, P.**, Ghimire, R., and Cho, Y. 2018. Effects of cover crops on soil profile carbon, nitrogen, and water content. SRCC, ENMU, Portales, NM, Apr 4.
- Acharya, P.**, Sapkota, R., and Sapkota, P. 2013. Study on non-chemical approach to effectively manage the aphid population in green beans (*Phaseolus vulgaris* L.). Organic Agriculture Research Finding Seminar. Nepal Agriculture Research Council, Khumaltar, Kathmandu, July 22.

Participation in Professional Development Meetings/ Events

- 2023 Farmers' Field Day. NMSU Agriculture Science Center, Clovis, NM. Aug 1.
- 2023 Workshop on 'Carbon farming in New Mexico', NMSU Carbon Management and Soil Health Initiative, Albuquerque, NM, July 26.
- 2022 International Annual Meeting of ASA, CSSA, and SSSA, Baltimore, MD. Nov 6–9.
- 2021 American Geophysical Union Fall Meeting, New Orleans, LA, Dec 13–17.
- 2021 Graduate Student Leadership Conference. ASA-CSSA-SSSA, Salt Lake City, UT, Nov 6–7.
- 2021 International Annual Meeting of ASA, CSSA, and SSSA, Salt Lake City, UT. Nov 7–10.
- 2021 Farmers' Field Day. NMSU Agriculture Science Center, Clovis, NM. Aug 3.
- 2020 International Annual Meeting of ASA, CSSA, and SSSA *Virtual*. Nov 9–13.
- 2019 Innovative Farming Conference, Central Curry and Roosevelt Soil and Water Conservation District, Clovis, NM. Dec 5.
- 2019 International Annual Meeting of ASA, CSSA, and SSSA, San Antonio, TX. Nov 9–13.
- 2019 Farmers' Field Day. NMSU Agriculture Science Center, Clovis, NM. Aug 8.
- 2018 Student Leadership Conference, Silver City, NM. Oct 26–27.
- 2018 Farmers' Field Day. NMSU Agriculture Science Center, Clovis, NM. Aug 9.
- 2018 Nepalese Agricultural Professionals of Americas (NAPA) First Biennial Conference, Oklahoma City, Oklahoma. May 26–27.

AWARDS AND HONORS

- 2023 Gerald O. Mott Award, ASA-SSSA-CSSA
- 2022–2023 Salopek Foundation Endowed Scholarship (**\$2000**)
- 2022 Arden and Elsie Baltensperger Endowed Scholarship (**\$1341**)

- 2022 Baldwin and Reichert Agronomy Travel Award (**\$670**)
- 2022 Travel award for ASA, CSSA, and SSSA annual meeting 2022 (Baltimore, MD) through Western Society of Crop Science (**\$750**)
- 2021–2022 Bayer Crop Science Encompass Scholar
- 2021 Arden and Elsie Baltensperger Endowed Scholarship (**\$500**)
- 2020–2021 Salopek Foundation Endowed Scholarship (**\$2000**)
- 2020–2021 LE Sparks and Lucille Denton Funkhouser Tatreault End Fnd Scholarship (**\$1000**)
- 2010–2014 Merit Scholarship on Bachelor of Science (Agriculture), IAAS, Tribhuvan University (**Full tuition fee waiver**)

OUTREACH MATERIALS AND ACTIVITIES

- 2023 Presentation entitled "Forage crops perennial grasses for regenerating semi-arid landscapes", Farmers' Field Day, NMSU Agricultural Science Center, Clovis, NM, Aug 1.
- 2023 **Acharya, P.**, Ghimire, R., 2023. Cover crops for improving nitrogen use efficiency in a semiarid irrigated forage rotation. Final Project Report, Sustainable Agriculture Research and Education (SARE). [[CrossRef](#)]
- 2022 Ghimire, R., **Acharya, P.**, Thapa, V. R., Paye, W. S., 2022. Carbon sequestration and soil health improvements in arid and semiarid croplands. Annual Progress Report, NMSU Agricultural Science Center at Clovis, NM. [[CrossRef](#)]
- 2022 Ghimire, R., **Acharya, P.**, 2022. Soil profile carbon and nitrogen in limited-irrigation winter wheat-sorghum fallow rotation. Annual Progress Report, NMSU Agricultural Science Center at Clovis, NM. [[CrossRef](#)]
- 2021 Ghimire, R., **Acharya, P.**, 2021. Greenhouse gas balance of semi-arid irrigated cropping systems. Annual Progress Report, NMSU Agricultural Science Center at Clovis, NM. [[CrossRef](#)]
- 2021 Featured in an article "A New Mexico college is aiming to help the agriculture industry fight climate change in arid environments". Albuquerque Journal. Oct 15, 2021. [[CrossRef](#)]
- 2021 Featured in an article Capturing CO₂ – ACES launches coordinated effort on carbon sequestration and economic development by Cassie McClure. ACES Magazine. Volume 5, Spring 2021. [[CrossRef](#)]
- 2020 Ghimire, R., **Acharya, P.**, Paye, W. S., 2020. Cover crops affect greenhouse gas emissions and crop yield in irrigated forage production. Annual Progress Report, NMSU Agricultural Science Center at Clovis, NM. [[CrossRef](#)]

TEACHING/ MENTORING EXPERIENCE

- 2020 **Teaching Assistant** (Instructor of record: Dr. Blair Stringam)
Courses: Environmental Science (E S 110G)

- 2020 **Teaching Assistant** (Instructor of record: Dr. Nicole Pietrasiak, Dr. Colby Brungard)
Courses: Soils laboratory (SOILS 252L)
- 2017–2018 **Teaching Assistant** (Instructor of record)
Courses: General Biology I: Subcellular through Organismic Biology (BIOL 154L), Biology for General Education (BIOL 113L)
- 2017–2019 **Teaching Assistant** (Instructor of record: Dr. Young Cho and Dr. Manuel Varela)
Courses: Plant Systematics Lab (BIOL 410/510L), Genetics Lab (BIOL 304L), General Botany Lab (BIOL 216L), General Biology Lab (BIOL 154L), Microbial Physiology Lab (BIOL 409/509L), Microbiology Lab (BIOL 306L)
- 2018 **Library Tutor**
Courses: General Biology I: Subcellular through Organismic Biology (BIOL 154L), Biology for General Education (BIOL 113L) & Genetics Lab (BIOL 304L)
- 2015 **Agriculture Instructor** (Instructor of record)
Shree Seti Devi Panchakanya Higher Secondary School, Nepal
Courses: Principles of agronomy, Soil science, Industrial entomology and mushroom production, Floriculture, and nursery management
- 2014–15 **Agriculture Instructor** (Instructor of record)
Galkot Higher Secondary School, Nepal
Courses: Principles of agronomy, Soil science, Plant protection, Crop production

NON-ACADEMIC WORKS

- 2018–2019 **Secretary** at International Club, ENMU, Portales
- 2017 **Livelihood Coordinator** at World Vision International Nepal, Gorkha, Nepal
- 2015–2016 **Food Security and Livelihood Coordinator** at Rural Development Tuki Association, Dolakha, Nepal
- 2011–2015 **President** at Integrated Community Development Centre, Nepal
- 2013 **Event Coordinator** for Assembly on climate change, NYCA, Lamjung, Nepal

VOLUNTEER SERVICES

- 2021 onwards **Reviewer** for Field Crops Research (3), Scientific Reports (1), Applied Soil Ecology (2), Crop Science (1), Agrosystems, Geosciences, and Environment (1)
- 2023 **Judge Volunteer** for Soil Carbon and Greenhouse Gas Emissions Oral I and Poster. 2023. International Annual Meeting of ASA, CSSA, and SSSA, St Louis, MO, Oct 29 – Nov 1
- 2023 **Session Moderator** for Soil Carbon and Greenhouse Gas Emissions General Oral II. 2023. International Annual Meeting of ASA, CSSA, and SSSA, St Louis, MO, Oct 29 – Nov 1

- 2019 **Judging Volunteer** at Southeastern New Mexico Regional Student Research Challenge, ENMU, Portales, NM. *March 2*
- 2018 **Panel Discussion Leader** on 'Global Community' topic at Student Leadership Conference, Western New Mexico University, Silver City, NM, *Oct 26–27*
- 2018 **Judging Volunteer** at Southeastern New Mexico Regional Student Research Challenge, ENMU, Portales, NM. *March 3*
- Till date **Research and Development Proposal Writer** for collecting funds through different organizations

PROFESSIONAL ASSOCIATIONS

- 2018 onwards American Society of Agronomy, Soil Science Society of America, and Crop Science Society of America
- 2018 onwards American Association for the Advancement of Science (AAAS)

SKILLS AND TRAININGS

Skills	MS office package Data analysis using SAS and R analytical software Data analysis/visualization using SigmaPlot and JMP Pro software Operate LECO 828 carbon and nitrogen analyzer (LECO Corporation, St. Joseph, MI, USA), automated Timberline Ammonia Analyzer (Timberline Instruments, Boulder, CO, USA), Li-COR 820 Infrared gas analyzer (Li-COR Biosciences, Lincoln, NE, USA), inorganic carbon analyzer (UIC, Inc., IL, USA), CO ₂ gas analyzer (EGM-5, PPSystems, Amesbury, MA, USA), MIRA Pico laser analyzer (Aeris Technologies, Hayward, CA, USA), Li-COR greenhouse gas analyzer (Li-COR Biosciences, Lincoln, NE, USA)
Trainings	Project Concept Note and Report Writing (1 day) Group Dynamics (3 days)

PERSONAL ASSESSMENTS

- Top-five strengths:** deliberative, futuristic, maximizer, adaptability, and strategic [Assessment done on Apr 5, 2022; CliftonStrengths, Gallup, Inc.]
- Personality at work:** SC [**Steadiness** (even-tempered, accommodating, patient, humble, and tactful) and **Conscientiousness** (analytical, reserved, precise, private, and systematic)] [Assessment done on Sept 27, 2021; DiSC Assessment, John Wiley & Sons, Inc.]